FORM CO-42 (10/11/41)

ELECTRICAL EQUIPMENT
FOR
FARM, HOME AND COMMUNITY USE

A LIST OF TYPES AND SOURCES OF EQUIPMENT

COOPERATIVES' OPERATIONS DIVISION

UNITED STATES DEPARTMENT OF AGRICULTURE
RURAL ELECTRIFICATION ADMINISTRATION
WASHINGTON, D. C.

UNITED STATES DEPARTMENT OF AGRICULTURE
Rural Electrification Administration
Washington

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OPERATIONS MEMORANDUM NO. 25.1

ELECTRICAL EQUIPMENT FOR FARM, HOME AND COMMUNITY USE

A List of Types and Sources of Equipment

TO ALL SYSTEM SUPERINTENDENTS AND MANAGERS:

The attached material entitled "Electrical Equipment for Farm, Home, and Community Use" gives the sources of supply, descriptions, specifications and prices for electrical appliances and equipment. It is intended for use in connection with the establishment of nutrition centers and for the increase in the production and preservation of food. Flour Mills, Ranges, Hot Plates, Roasters, various types of Refrigerators, Ultraviolet Lamps, Time Clocks, Poultry Water Warmers, Chick Brooder, Pig Brooder, Stock Tank Heater, Dehydrator, Garden Waterer, Service Cabinet and Flour Sifters are covered. Information concerning other useful electrical equipment will be forwarded to you from time to time.

This material should be assembled in a separate loose-leaf binder, so that additional information can be inserted as received.

C. A. Winder, Chief
Cooperatives' Operations Division

Attachment

INTRODUCTION

1. The material assembled here is issued in response to requests from REA Systems for information concerning certain types of equipment and respective sources of supply. Supplementary information will be issued from time to time as it becomes available.

2. The listing of equipment does not constitute REA approval, nor do the manufacturers mentioned necessarily constitute the complete field. The order of listing is not intended to indicate any preference whatsoever.

3. REA Systems are not limited as to source of supply. If the equipment is to be financed through REA, Systems must submit complete price and specification information to the Cooperatives' Operations Division for approval and must also secure proper clearance of an "S" loan before orders can be placed with a supplier.

4. Refer to Finance Bulletin No. 18, July 29, 1941, and to the supplementary instructions contained in the Administrator's Memorandum of August 29, 1941, to which was attached "Loans Under Section 5 of the REA Act," for procedure to follow in financing appliances and equipment.

5. Unless otherwise stated, all prices quoted are list prices given by the manufacturers at the time the information was secured and are subject to change without notice.

6. Some of the manufacturers listed are offering substantial discounts, some as high as 50%, on equipment purchased for school or community centers. It is expected that REA Systems will negotiate individually for best prices obtainable. For further information hereon, please write to the Cooperatives' Operations Division, Rural Electrification Administration, Washington, D. C.

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FLOUR MILLS

A. HAMMER MILLS

1. Bell Hammer Mill - Manufactured and sold by C. S. Bell Company, Hillsboro, Ohio.

Manufacturer's Description:

Grinds wheat and shelled corn, through a $\frac{1}{4}$ inch screen. Also grinds oats, barley, corn cobs, stalks, hay, alfalfa, milo, soy beans, etc. Also, with grain elevator attachment, the No. 1 mill elevates grain or feed at a rate of 40 to 50 bushels per hour, up to a height of 50 feet, using a $1\frac{1}{2}$ H.P. motor. The No. 1 mill is recommended for all general grinding up to 800 to 1,000 pounds per hour. Various sizes of screens my be substituted for the standard $\frac{1}{4}$ inch screen, but this changes the capacity of the mill accordingly. A 2 H.P. motor may be substituted on the No. 1 mill, according to the requirements of the user. The No. 2 mill, with either a 3 or 5 H.P. motor, is recommended for the large users with big acreage of soybean hay, sweet clover, alfalfa and big roughage crops. Mill is mounted on a semi-steel base with V-belt drive and electric motor, and has Cutler-Hammer push button starter, blower, two-way spout and dust arrester. May be purchased as a complete unit, or separately. (See Price List)

Manufacturer's Specifications:

High carbon steel shaft
Steel rotor plates
Hammers are interchangeable and reversible
Bearings are Fafnir or S.K.F.
Ear corn breaker made of hard, steel alloy
Recommended operating speed 3500 R.P.M.
$1\frac{1}{2}$ or 2 H.P. electric motor for No. 1 mill
3 or 5 H.P. electric motor for No. 2 mill
Motors are Westinghouse, General Electric or other high grade standard
Screen with No. 1 mill--6 inches wide, area 100 square inches
Screen with No. 2 mill--9 inches wide, area 150 square inches
Floor space No. 1 mill--34 inches by 27 inches
Floor space No. 2 mill--36 inches by 30 inches
Height of mill proper 25 inches
Height over dust arrester 56 inches
Feed opening No. 1 mill--5 inches wide, 4 inches deep
Feed opening No. 2 mill--8 inches wide, 4 inches deep
Feed table--20 inches long, 2 3/4 inches deep

List Prices — Mill	No. 1	No. 2
Mill with blower and double spout sacking dust arrester	$ 59.75	$ 79.75
V-belt Drive (V-belt pulley and belt) for use with 1750 R.P.M. motor	5.95	11.90
V-belt Drive (V-belt pulley and belt) for use with 1450 R.P.M. motor	9.50	19.00
V-belt Drive (V-belt pulley and belt) for use with 1150 R.P.M. motor	11.50	23.00
Semi Steel Base for mill and motor	5.00	6.00
Motors:		
1½ H.P. single phase, 110/220 volts, 60 cycle	54.00	
2 H.P. single phase, 110/220 volts, 60 cycle	71.00	
3 H.P. single phase, 220 volts, 60 cycle		91.00
5 H.P. single phase, 220 volts, 60 cycle		143.00
Starter Switch: for 1½ or 2 H.P. motor	10.00	
for 3 H.P. motor		17.00
for 5 H.P. motor		21.00
Complete Unit with 1½ H.P. motor	134.70	
with 2 H.P. motor	151.70	
with 3 H.P. motor		205.65
with 5 H.P. motor		261.65
Extra Equipment:		
Screens (one furnished with mill) each (Sizes: 1/32, 1/16, 3/32, 1/8, 3/16, 1/4, 3/8, 1/2, 3/4 and 1 inch)	1.45	1.95
Automatic stop mechanism	10.00	12.75
Grain elevating attachment	7.75	9.75
Extra swivel spout (for overhead bin)	8.75	8.75
Extra elbows, each	.70	.90
Extra blower pipe, per foot	.16	.23

2. Viking Electric Hammer Mill

Viking Manufacturing Company
219 East Washington Street
Jackson, Michigan

Manufacturer's Description:

The Viking mill has a new improved positive automatic feed. The operator needs only to push the control button. When using a 3/16" screen the Standard mill will grind approximately 300 pounds of corn or 200 pounds of oats per hour and the Master mill will grind a little more than twice those amounts. For grinding ear corn, hay, corn stalks and other roughage, an ear corn grinding attachment and a roughage grinding attachment may be purchased. However, the feeding with these attachments must be done by hand. Either attachment fits on the front of the mill in place of the front cover plate.

Manufacturer's Specifications (Standard Size Mill)

Motor	1/2 H.P. Repulsion Induction 110 or 220 volts 3600 R.P.M. totally enclosed.
Motor Protection	Automatic with manual reset
Starting Switch	Built into mill
Cord	10 ft. rubber cord with attachment plug.
Hammers	9 swinging, heat treated, reversible
Screens	Full circular, 10" diameter
Mill Base and Housing	All electrically welded steel.
Automatic Feeding Device	Rotating rubber feeder wheel adjustable to 8 rates of feed.
Ear Corn Grinding Attachment	Not available
Roughage Grinding Attachment	Not available
Dimensions	14" wide x 13 1/2" deep x 17 1/2" high
Weight crated	Approximately 150 pounds

Manufacturer's Specifications (Master Size Mill):

Motor	1 H.P. Repulsion Induction 110 or 220 volts 3600 R.P.M. totally enclosed
Motor Protection	Automatic with manual reset
Starting switch	Built into mill
Cord	None furnished
Hammers	15 swinging, heat treated reversible
Screens	Full circular, 14" diameter
Mill base and housing	All electrically welded steel
Automatic Feeding Device	Rotating rubber feeder wheel adjustable to 8 rates of feed
Ear Corn Grinding Attachment	Two-stage grinding arrangement Heat treated rotating knives
Roughage Grinding Attachment	Power driven rolls equipped with quick-acting safety release
Dimensions	20 1/2" wide x 19" deep x 21 1/2" high
Weight crated	Approximately 290 pounds

Mills are guaranteed against defective material and workmanship for a period of one year. Hammers are guaranteed against breakage for all time.

List Prices (F.O.B. Jackson, Michigan):

Standard mill complete with 1/2 H.P. motor, overload protection switch, extension cord and plug, three screens (1/8", 3/16", 1/4")	$88.00
Master mill complete with 1 H.P. motor, overload protection switch, three screens (1/8", 3/16", 1/4")	124.50
Ear Corn Grinding Front (For Master mill only)	9.75

Roughage Grinding Front (For Master mill only)	$ 31.50
Extra Screens (For 1/2 H.P. Standard Mill) each	2.00
Extra Screens (For 1 H.P. Master Mill) each	3.00

Screen sizes are 1/16", 3/32", 1/8", 5/32", 3/16", 1/4", 3/8", 1/2" and 1"

3. Raymond Pulverizer Mill - manufactured and sold by the Raymond Pulverizer Division, Combustion Engineering Company, Incorporated, Chicago, Illinois.

The small, high-speed demonstration hammer mill is designed primarily for laboratory applications but may also be used in grinding small batches of grain at the home or nutrition center.

Manufacturer's Description:

This Laboratory Mill produces the same character of finished material as the large commercial pulverizers. It is therefore especially adapted for use in experimental laboratories and industrial plants for developing new products or making test runs on materials in manufacture. The mill is suitable for pulverizing small batches from about a half-pound to several pounds at a time. By the use of the interchangeable screens of different size perforations, a range of fineness can be obtained from 20-mesh up to a very fine powder. The hammers are of the swing type, made of special metal and pivoted around the periphery of the rotor. They develop a high tip speed, insuring rapid reduction of the material. The opening through the bottom part of the grinding chamber permits the pulverized material to pass through the screen into the base of the mill for discharge to the container. As the product is ground, the fine particles pass through a cloth tube which filters out the surplus air. A metal slip ring fastens the cloth tube to the grooved base of the mill, and also to the rim of the container, preventing the escape of dust. The mill is equipped with a high speed motor of 1/2 H.P., and the rotor is mounted directly on the shaft. Cord and plug are furnished for operating on 110-volt DC, or on single-phase 60-cycle AC circuit. Five full-circle lap-joint screens with various size perforations are furnished with the mill. They can be readily changed by unscrewing the clamp nuts and removing the cover of the mill. This makes the entire grinding chamber accessible for cleaning or replacement of parts. The detail parts of the mill are made to precision standards and of selected materials which have been found by experience to be adequate for this type of operating condition. There is nothing complicated to get out of order, and the simplicity of design and sturdiness of construction assure enduring and trouble-free service.

List Prices: (F.O.B. Chicago, Illinois)

Standard hand-fed laboratory mill with brass housing and steel screens, hammers and discs. Complete as described above	$135.00
Same unit as above, but completely of stainless steel	190.00

This company also manufactures mills for commercial applications with corresponding larger capacity and higher price.

4. Mikro-Pulverizer Hammer Mill - manufactured and sold by the Pulverizing Machinery Company, Roselle Park, New Jersey.

The demonstration mill is of special design and is not yet in regular production. Full details will be furnished when descriptive literature and specifications are submitted by the manufacturer. The estimated list price of such a mill is $95.00 complete with motor, wiring connections, switch, etc.

B. BURR MILLS

1. Arcade Mill - manufactured and sold by the Arcade Manufacturing Company of Freeport, Illinois; also sold by Sears, Roebuck and Company.

Manufacturer's Description:

Grinds all sorts of grain, wet or dry. The adjustable grinding burrs can be set to crack poultry feed or adjusted to grind flour from wheat, corn, rye, rice, barley and other small grains. The flour is fine enough for culinary purposes and contains the entire food properties of the grain. Freshly ground flours containing all of the nutritive elements will not keep for any length of time. This mill, therefore, affords a convenient means of providing freshly ground flour in the home. In setting up the mill, attach it firmly to a base (bench or plank) so that there will be no vibration. Do not operate the mill without any grain in it as this will rapidly wear out the grinders. One of the burrs is stationary and the other is revolving. The movable grinding burr is assembled in a manner that evenly distributes the grain during the grinding process and prevents the burrs from coming in actual contact. The grain cannot be sent into the grinders faster than they are able to take care of it and there is no difficulty, therefore, from clogging the burrs. If an exceedingly fine grade of flour is required, it will be well to run it through the mill once in a somewhat coarse state and then run it through with the grinders adjusted for very fine flour. In producing wheat flour it is sometimes desirable to run the flour through a fine sieve. This will separate the bran. This bran may be used in other directions or may be run through the mill once more and then mixed with the flour. Bread baked with this flour has a very fine texture.

Manufacturer's Specifications:

Grey iron frame and pulley
Steel hoppe, 7" high, 8½" top diameter
Hard iron grinding burrs
Large bearings, lubricated by means of oil cups
Finish, orange enamel
Overall height, 23"
Overall depth 14 3/4"; width 11 1/4".
Weight of mill, 23 pounds

List Price of belt-driven mill:

(Less motor and belt). $8.95

Conversion of Arcade Mill for V-Belt Motor Drive

For electric motor drive the flat pulley (furnished with the mill) is removed and a 10-inch V-pulley is substituted. A 3-step cone pulley on the motor shaft gives variable speed and a counter-shaft with a 10-inch and a 2-inch pulley is used for speed reduction. Approximate size of the wooden base is 12 inches by 32 inches. A grinding speed of approximately 90 R.P.M. was used when testing this mill.

Note: A drawing, which illustrates the conversion of this mill to electric drive, is shown on page 5 of the booklet entitled "Home and Community Milling," which has already been issued by REA.

	Materials and Equipment	List Prices
1	Belt-operated flour mill with two 3/8" bolts and washers for attaching to table or board	$ 8.95
2	10-inch V-Pulleys @ $1.49 (one may possibly be included in the mill price)	2.98
1	2-inch V-Pulley	.40
1	3-step cone pulley 3 3/8", 2 5/8", 2"	.55
1	V-Belt 1/2" x 66"	.64
1	V-Belt 1/2" x 42"	.40
1	1/2" x 12" piece cold rolled steel shaft	.15
2	Bronze-bushed shaft hangers 1/2" bore, 7" or 8" high @ .95	1.90
1	1/2" line shaft collar	.08
2	1" x 2" x 12" cleats with screws for holding motor rail in place	.03
1	1" x 1" x 10" motor rail with two 5/16" x 1 1/4" carriage bolts	.05
	Total (less motor and wooden base)	$16.13

The mill should be operated with a portable 1/4 h. p. capacitor start or repulsion induction motor. This type of motor sells for $10 to $14. If the farm utility motor is used and it is of the split phase type, extreme caution should be exercised not to start the motor under load. That is, the mill burrs should be loose.

2. Meadows Gold Medal Stone Burr Grist Mill - manufactured and sold by Meadows Mill Company, North Wilkesboro, North Carolina.

Manufacturer's Description:

Use genuine domestic flint pebble stones of uniform texture and hardness. These stones give long wear with a minimum of dressing. The body, or binder, of these stones is medium hard so that it will wear down, leaving the hard flint grinding points exposed like teeth of a file. This body is also porous enough to absorb the excess oil of the grain, preventing this from forming a glaze over the face of the stone. There is a patented grain cleaning system on all sizes except the 12", a patented device to lock the burrs in any position at which they are set, a simple single motion feed control and an oscillating sifter which thoroughly mixes the meal before it is discharged. The patented grain receiver allows grain to be fed from the hopper in any desired volume, yet cob ends or any coarse trash may escape without choking the slowest feed. Rubber mountings give long life and smooth noiseless action in the vibrators and sifter head. Meal chambers are lined with metal to give long wear. These mills will grind, sift and sack (Sacking Elevator extra) the finest quality corn meal, and when equipped with Special Flour Sifter will grind an excellent grade of graham or whole wheat flour. Also home ground grits can be made by simply setting the stones for coarse grinding. Cleaning and separating is accomplished by using a Meadows Grit Bolter. This grit bolter may be used with the same power required for the mill alone.

Manufacturer's Specifications for Mills:

No. 1	No. 2	No. 3	No. 4	No. 5
Size Diameters of Burrs				
12"	16"	20"	24"	30"
Shipping Weights				
425	675	925	1160	1575
Speed Recommended--R.P.M.				
750 to 800	700 to 750	650 to 700	600 to 650	500 to 550
Capacity - Bushels per Hour - Unsifted				
4	5	8	12	20

No. 1	No. 2	No. 3	No. 4	No. 5
Capacity - Bushels per Hour - Sifted				
3	4	6	8	12
Horsepower				
3 to 5	5 to 7	8 to 10	10 to 15	15 to 25
Size Pulley Regularly Furnished				
8" x 4"	10" x 5"	12" x 6"	14" x 6"	16" x 8"
Floor Space Required				
48" x 34"	54" x 38"	54" x 42"	58" x 47"	60" x 52"
Shaft Size				
1 7/16"	1 7/16"	1 11/16"	1 15/16"	1 15/16"

List Prices:

No. 1 mill (less motor)	$ 75.00
No. 2 mill (less motor)	100.00
No. 3 mill (less motor)	135.00
No. 4 mill (less motor)	170.00
No. 5 mill (less motor)	230.00

Extras:

Sacking Elevator complete with drive belt and braces for any size mill.	24.00
Special Flour Sifter for any size mill, 30-mesh screen (interchangeable with meal sifter)	7.50
Set of Wheat Cleaning Screens for grain shoe or weevil spout for any size mill (interchangeable with corn screens)	2.50
No. 27 Guaranteed Pick, less handle	2.25
No. 83 Lighter Pick, less handle (no guaranty)	1.50
No. 2 Grit Bolter for use with 12" to 20" mill	170.00
No. 3 Grit Bolter for use with 24" to 30" mill	180.00

3. Harries Hol-Grain Mill - manufactured and sold by Hol-Grain Mill & Milling Company, 161 West Wisconsin Avenue, Milwaukee, Wisconsin.

Manufacturer's Description:

The Harries Hol-Grain Mill is in reality a miniature of the historic old stone mill with the addition of certain refinements to produce a good baking flour without removing the roughage inherent in the flour by the old grinding method. It consists of two cup-shaped stones, 9" in diameter, connected to and driven by a one H.P. motor at a speed of approximately 3500 R.P.M. The wheat, contained in a hopper immediately above the stone grinding members, is admitted through an opening, concentric with the shaft of the motor, into and between the two cup-shaped stone grinding members. The flow of the grain to these members is automatically regulated by a patented device contained in the grinding chamber. The motor is vertically mounted in the hopper, concentric with the hopper. It, in turn, is covered by a polished metal hood mounted concentrically with an upwardly extended shaft of the motor designed to receive a bladed fan wheel. Air drawn by the fan through the upper opening in the hood is made to flow over the motor and the wheat and is then exhausted through the outer periphery of the hopper. The air in contact with the wheat serves to fan the wheat before entering the grinding chamber.

Aeration of the flour, essential to the elimination of inherent condensation during milling, is provided by a specially designed aerator connected to the lower portion of the grinding chamber. Air drawn through port openings of this aerator by the fan action of the grinding members is exhausted through the canton flannel stocking connecting the grinding chamber with the flour receiver. In the design of this mill special attention is given to the ultimate flour temperature during the grinding period. This is of extreme importance, and at no time does the temperature rise exceed that of 35 degrees Centigrade above room temperature. With this low temperature grinding the flour retains perishable vitamin.

This mill is simple in design and operation. In from 7 to 10 hours after starting there will be available 200 pounds of finely ground whole grain wheat germ flour.

Dimensions of the mill stand are 32 inches wide, 32 inches deep and 52 inches high. The overall dimension, covering stand, mill and hopper, is 76 inches.

List Prices:

The price of a single mill (as described above) is $600, lots of 10 mills are $360 each and lots of 25 mills are $300 each.

A small portable batch-type mill is also manufactured by this company Additional data and prices are not available at the present time.

4. Enterprise Flour Mill

This is a steel burr mill with the burrs directly connected to the motor. The proper speed is obtained by means of a gear reduction mechanism. This mill is manufactured and sold by the Enterprise Manufacturing Company of Philadelphia, Pennsylvania. It is driven by a 1/3 H.P. motor and the proposed list price is $55.00. Further details will be furnished when available.

F. Portable Flour Mill

II.

COOKING AND BAKING EQUIPMENT

A. Electric Ranges

If an electric range is desired at the Nutrition Center, any one of the various low cost types may be used. In all probability, the light, timer and clock would not be needed. A special range circuit of 110/220 volts would be required.

Partial list of Manufacturers as follows:

Comstock-Castle Stove Company
Quincy, Illinois

Crosley Corporation
Cincinnati, Ohio

Crown Stove Works
Chicago, Illinois

Electromaster, Inc.
Detroit, Michigan

Florence Stove Co.
Gardner, Massachusetts

Frigidaire General Motors Sales Corp.
Dayton, Ohio

Gibson Electric Refrigerator Corp.
Greenville, Michigan

Landers, Frary & Clark
New Britain, Connecticut
(Universal)

Lindemann & Hoverson Co.
Milwaukee, Wisconsin

Mallable Iron Range Co.
Beaver Dam, Wisconsin
(Monarch)

Phillips & Buttorff Mfg. Co.
Nashville, Tennessee
(Enterprise Ranges)

Renown Stove Co.
Owosso, Michigan

Roberts & Mander Stove Co.
Hatboro, Pennsylvania

Round Oak Company
Dowagiac, Michigan

Thermador Electric Mfg. Co.
Los Angeles, California

Westinghouse Electric & Manufacturing Co.
Mansfield, Ohio

Edison General Electiic Appliance Co.
Chicago, Illinois (Hotpoint)

Montgomery Ward & Co.

General Electric Co.
Cleveland, Ohio

Malleable Steel Range Manufacturing Co.
South Bend, Indiana

Sears, Roebuck and Co.

Norge Division Borg-Warner Corp.
Detroit, Michigan

B. Hot Plates

In general, the minimum requirement for hot plate equipment at a nutrition center would be one double unit, This may be supplemented with a single unit or another double unit according to the need. Extremely cheap models should be avoided as the switches are liable to break down, causing maintenance expense and inconvenience. A separate circuit of #10 wire (or larger) should be installed for the hot plate equipment. Both equipment and wiring should meet with National Underwriters' approval. The list price for approved equipment is approximately $5 for single unit and from $8.50 to $17.00 for a double unit.

Partial list of Manufacturers as follows:

Acme Electric Heating Co.
Boston, Massachusetts

Beardsley & Wolcott Mfg. Co.
Waterbury, Connecticut (Torrid)

Bersted Mfg. Co.
Fostoria, Ohio

Capital Products Co.
Winsted, Connecticut

Chase Brass & Copper Co., Inc.
Waterbury, Connecticut

Chicago Electric Mfg. Co.
Chicago, Illinois

Dominion Electrical Mfg. Co.
Mansfield, Ohio

Edison General Electric Appliance Co.
Chicago, Illinois

Electromaster, Inc.
Detroit, Michigan

Estate Stove Co.
Hamilton, Ohio

Fritzgerald Mfg. Co.
Torrington, Connecticut

Griswold Mfg. Co.
Erie, Pennsylvania

General Electric Co.
Bridgeport, Connecticut

Hoskins Mfg. Co.
Detroit, Michigan

Kingsford Specialty Co.
Philadelphia, Pennsylvania

Knapp-Monarch Co.
St. Louis, Missouri

Landers, Frary & Clark, Co.
New Britain, Connecticut
(Univeraal)

Liberty Electric Company
Indianapolis, Indiana

Metal Ware Corp.
Two Rivers, Wisconsin

Naxon Utilities Corp.
Chicago, Illinois

Phillips & Buttorff Mfg. Co.
Nashville, Tennessee

Proctor Electric Co.
Philadelphia, Pennsylvania

Prometheus Electric Corp.
New York, New York

Ernest Reich & Co.
Quakertown, Pennsylvania

Robeson-Rochester Corp.
Rochester, New York

Rutenber Electric Co.
Marion, Indiana

Samson-United Corp.
Rochester, New York

Sheridan Electro Corp.
Chicago, Illinois

Silex Co.
Hartford, Connecticut

Son-Chief Electric, Inc.
Winsted, Connecticut

Standard Electric Mfg. Co.
Toledo, Ohio

Star Mfg. Co., Inc.
St. Louis, Missouri

Stern-Brown, Inc.
New York, New York

Superior Electric Products Corp.
St. Louis, Missouri
(Superlectric)

Swartzbaugh Mfg.Co.
Toledo, Ohio
(Everhot)

U. S. Mfg. Co.
Decatur, Illinois

Utility Electric Co.
St. Louis, Missouri

Waage Mfg. Co.
Chicago, Illinois

Watlow Electric Mfg. Co.
St. Louis, Missouri

Wesix Electric Heater Co.
San Francisco, California

Wessco Mfg. Co.
Chicago, Illinois

Westinghouse Electric & Mfg. Co.
Mansfield, Ohio

E. L. Wiegand Co.
Pittsburgh, Pennsylvania

C. Roasters

A complete meal of vegetables, meat and dessert for as many as 10 people may be prepared at one time with a standard 18 or 20 quart roaster. However, it is especially useful in cooking one-dish meals and may also be used for baking. Prices for Underwriters' approved equipment range from $20 to $40.

Partial list of manufacturers as follows:

Brannon, Inc.
Detroit, Michigan

Crown Stove Works
Chicago, Illinois

General Electric Co.
Bridgeport, Connecticut

Landers Frary and Clark
New Britain, Connecticut
(Universal)

National Enameling & Stamping Co.
Milwaukee, Wisconsin
(Nesco)

Naxon Utilities Corp.
Chicago, Illinois
(Autochef)

Proctor Electric Co.
Philadelphia, Pennsylvania

Star Mfg. Co., Inc.
St. Louis, Missouri

Swartzbaugh Mfg. Co.
Toledo, Ohio
(Everhot)

Westinghouse Electric & Mfg. Co.
Mansfield, Ohio

III.

REFRIGERATION EQUIPMENT

A. Domestic Refrigerators (6 to 13 cubic feet storage capacity)

Domestic refrigerators of 6 cubic feet capacity or more are generally suitable for the proper preservation and storage of foods at the home or at the nutrition center. In purchasing a refrigerator, savings can often be effected by eliminating any special features or accessories not essential to the purpose which the refrigerator is to serve. The general features in all domestic refrigerators are the freezing coil, ice cube trays (number governed by size of refrigerator), drip tray, two or more full shelves, one or more split shelves on each side of the freezing coil and an electric light automatically controlled by the opening and closing of the refrigerator door. Some of the features found in the more expensive models are cold wall, dual temperature, one or more hydrators, glass shelves, meat compartment, frozen food compartment, dairy basket, set of ice-box dishes, water bottle, thermometer or food safety gauge and non-refrigerated storage bin. Care should be exercised to select a refrigerator of sufficient capacity to meet the requirements for the particular installation, allowing for estimated surplus storage as well as normal storage. If it is desired to store milk in a large can, refrigerators with a flexible shelf arrangement are available for this purpose.

List Prices:

6 cubic feet-----from $100 to $240
8 cubic feet-----from $165 to $265
9 cubic feet-----from $185 to $272
12 and 13 cubic feet----from $425 to $460

The above list prices are for the conventional ready-to-operate manufactured refrigerators.

Partial list of manufacturers as follows:

Crosley Corporation
Cincinatti, Ohio

Frigidaire Division
General Motors Sales Corp.
Dayton, Ohio

Gale Products
Galesburg, Illinois

Jewett Refrigerator Co.
Buffalo, New York

Edison Gen. Electric Appliance Co.
Chicago, Illinois
(Hotpoint)

4. Domestic refrigeration (Cont'd)

Leonard Division
Nash-Kelvinator Corp.
Detroit, Michigan

Heinz & Monschauer
Buffalo, New York

Montgomery-Ward Co.

Norge Division
Borg-Warner Corp.
Detroit, Michigan

Philco Radio & Television Corp.
Philadelphia, Pennsylvania

Stewart-Warner Corp.
1826 Diversey Parkway
Chicago, Illinois

Westinghouse Electric & Mfg. Co.
Mansfield, Ohio

General Electric Co.
Bridgeport, Connecticut

Gibson Electric Corp.
Greenville, Michigan

Copeland Refrigerator Corp.
Sidney, Ohio

Gilfillan Bros., Inc.
1815 Venice Blvd.
Los Angeles, California

O'Keefe & Merritt Co.
3700 East Olympic Blvd.
Los Angeles, California

Potter Refrigerator Corp.
220 Delaware Ave.
Buffalo, New York

Sunbeam Electric Mfg. Co.
Read and Morgan Ave.
Evansville, Indiana
(Distributed by Sears, Roebuck and Co.)

Sanitary Refrigerator Co.
Fond Du Lac, Wisconsin

B. Commercial Reach-In Refrigerators (16 to 60 cubic feet capacity)

If capacities of over 8 cubic feet are required, it is suggested that knocked-down boxes of 16 cubic feet or more be considered. There will be a substantial saving in first cost if this type of equipment is purchased. For example: The Amana Society at Amana, Iowa, has offered a 16 cubic foot complete refrigerator (shipped knocked-down) for $142.00 F.O.B. Amana and a 24 cubic foot box for $191.00. The commercial size reach-in refrigerators are needed where large quantities of perishable foods are to be preserved. Some of these boxes feature two or three temperature zones whereby a quick-freeze compartment and/or a below-freezing storage compartment are built in to the refrigerator to supplement the regular 35° storage space.

Most of the companies listed as manufacturers of domestic refrigerators sell boxes of 16 cubic feet capacity and some of them manufacture still larger sizes. The Amana Society has 30, 40 and 60 cubic feet refrigerators available in addition to the 16 and 24 feet models already mentioned. List prices and operating costs are correspondingly higher.

1. [illegible] Refrigerators (10 to [illegible] capacity)

C. Walk-In Refrigerators (200 to 1000 cubic feet capacity)

Walk-In refrigerators may prove to be most practical at a large farm or large nutrition center where ample space is available. It is generally desirable to install therein a zero compartment for freezing foods or for frozen-food storage. The cabinets (walk-in and freezer chest) may be constructed locally with consequent saving in total cost. Local insulating material, such as ground corn cobs or corn stalks mixed with limestone, may be used providing there is a thicker space than is specified for the conventional type of insulating material. There is at least one manufacturer, the Amana Society, who sells a ready-built walk-in cooler at a low price. This complete cooler is 5' x 7' x 7' and is shipped knocked-down at a list price of $315.00 F.O.B. factory. This same manufacturer will furnish a door and jam for a home-built refrigerator at $45.00 F.O.B. factory.

Walk-In refrigerators of the one temperature type (35 degrees) averaging 250 to 300 cu. ft. can be built locally at a cost of $65.00 for materials and $150.00 to $200.00 for mechanical equipment. If the walk-in box is to be used primarily for milk storage the higher cost of equipment would apply because usually dairymen prefer fan coolers to tubing in order that the condensation in the room is kept at a minimum. One-half H.P. condensing units operate the 35 degree refrigerators satisfactorily. There will be an additional cost of $25 to $30 for the installation of the mechanical equipment by a skilled refrigeration workman.

Note: See "Combination Refrigerators" for details of materials and costs for home-built coolers.

Partial List of Manufacturers of Walk-In Coolers:

Amana Society
Amana, Iowa

Baker Ice Machine Co., Inc.
Omaha, Nebraska

Esco Cabinet Co.,
West Chester, Pennsylvania

Frick Co.
Waynesboro, Pennsylvania

General Electric Co.
Bloomfield, New Jersey

C. Main-In Refrigerators (200 to 1,500 cubic feet capacity)

Herrick Refrigerator Co.
Waterloo, Iowa

International Harvester Co.
Chicago, Ill.

Koch Refrigerator Co.
North Kansas City, Missouri

Low Temperature Equip. Co.
Kansas City, Missouri

McCray Refrigerator Sales Corp.
Kendallville, Indiana

O'Keefe & Merritt Co.
Los Angeles, California

Quillen Bros. Refrigerator Co.
Indianapolis, Indiana

The Smith Incubator Corp.
Bucyrus, Ohio

Victor Products Corp.
Hagerstown, Maryland

Westinghouse Elec. & Mfg. Co.
Mansfield, Ohio

Williams Oil-O-Matic Heating Corp.
Bloomington, Illinois

Wilson Cabinet Corp.
Smyrna, Delaware

The X. L. Refrigerating Co., Inc.
Chicago, Illinois

Sanitary Refrigerator Co.
Fond Du Lac, Wisconsin

Kansas City, Missouri

Low Temperature E[illegible]. Co.
Kansas City, Missouri

[illegible] Refrigeration Sales Corp.
[illegible], Indiana

[illegible] Products Co.
[illegible]

[illegible]. [illegible] Co.
[illegible], [illegible]

The [illegible] Thermometer Corp.
[illegible], [illegible]

[illegible] Ice Machine Corp.
[illegible], [illegible]

[illegible] Ice Co. [illegible]
[illegible], [illegible]

[illegible] Refrigeration [illegible]
[illegible], [illegible]

[illegible] Refrigeration Co.
[illegible], [illegible]

The X. L. [illegible] Co. [illegible]
Chicago, [illegible]

Sanitary Refrigerator [illegible]
Fond Du Lac, [illegible]

D. Quick Freeze or Zero Boxes (50 to 75 cubic feet capacity)

The quick-freeze system is designed to preserve foods in their natural state over long periods of time. The cost of building freezing plants varies according to size, design and location. The simplest set-up is a plant with only a zero box, which can be located in the school or farm basement. The cost of the compressor and other refrigeration equipment for such a unit varies from $150 to $200 (see detailed list of equipment below). Lumber, insulation and labor costs will vary with localities. When plywood, rust-proof screws and hinges for doors and the proper grade of paint and enamel are used, the cost of lumber and materials for the box itself will total from $40 to $60. If planer shavings (insulation) and spare lumber on the farm are used, the cost of materials for the box will be correspondingly lower. Construction, labor and also an estimated cost of $25 to $30 for the services of an experienced refrigeration workman will bring the total cost of such a home-built freezing plant between $200 and $300.

Mechanical equipment for a 50 cubic feet zero box (materials for box not included):

1/3 H.P. air-cooled freon condensing unit-single phase motor and pressure control.

240 feet 5/8" tinned tubing (zero box coil and suction line).

20 feet $\frac{1}{4}$" tinned tubing (liquid line)

1 - thermostatic expansion valve

1 - dehydrator

1 - scale trap

1 - 300 pound pressure gauge

1 - 90 pound compound gauge

1 - service thermometer with extended bulb-10 to 100 degrees F

1 - heat exchanger

6 - pounds freon

4 - 1/4 x 1/8 half union couplings

3 - pairs rust resistant 3" hinges and cadmium-plated screws

3 - pairs rust resistant lifts

20 feet hollow rubber door gasket

1 - ratchet valve wrench

Miscellaneous flare nuts and couplings

Partial list of manufacturers of refrigeration compressors:

Baker Ice Machinery Co., Inc.
Omaha, Nebraska

Brunner Mfg. Co.
Utica, New York

Carrier Corp.
Syracuse, New York

Copeland Refrigeration Corp.
Sidney, Ohio

Curtis Mfg. Co.
St. Louis, Missouri

Frigidaire Division
General Motors Sales Corp.
Dayton, Ohio

General Electric Co.
Bloomfield, New Jersey

Kelvinator Corp.
Detroit, Michigan

Merchant & Evans Co.
Philadelphia, Pennsylvania

O'Keefe & Merritt Co.
Los Angeles, California

Universal Cooler Corp.
Detroit, Michigan

Westinghouse Elec. & Mfg. Co.
Mansfield, Ohio

York Ice Machinery Co.
York, Pennsylvania

Partial list of manufacturers of refrigeration pressure controls:

Automatic Temperature Control Co., Inc.
Philadelphia, Pennsylvania

Cutler-Hammer, Inc.
Milwaukee, Wisconsin

Detroit Lubricator Co.
Detroit, Michigan

General Elec. Co.
Schenectady, New York

The Mercoid Corp.
Chicago, Illinois

Penn Elec. Switch Co.
Goshen, Indiana

Square D Co.
Detroit, Michigan

Partial list of manufacturers of refrigeration temperature controls:

Acme Elec. Heating Co.
Boston, Massachusetts

American Radiator & Standard Sanitary Corp.
Pittsburgh, Pennsylvania

Automatic Temperature Control Co., Inc.
Philadelphia, Pennsylvania

Detroit Lubricator Co.
Detroit, Michigan

General Elec. Co.
Schenectady, New York

Lewis Air Conditioners, Inc.
Minneapolis, Minnesota

The Mercoid Corp.
Chicago, Illinois

Minneapolis-Honeywell Regulator Co.
Minneapolis, Minnesota

Partial list of manufacturers of products [illegible]
control:

Automatic Temperature Control Co., Inc.
Philadelphia, Pennsylvania

Cutler-Hammer, Inc.
Milwaukee, Wisconsin

[illegible]

Detroit, Michigan

[illegible]

[illegible]

[illegible] Co.

[illegible]

[illegible]

[illegible]

Penn Elec. Switch Co.
Goshen, Indiana

Square D Co.
Detroit, Michigan

O. J. Tagliabue Mfg. Co.
18-88 Third Street
Brooklyn, New York

Time-O-Stat Controls Co.
Elkhart, Indiana

Westinghouse Elec. Mfg. Co.
Mansfield, Ohio

Partial list of manufacturers of refrigeration evaporator cooling coils:

Fedders Mfg. Co.
Buffalo, New York

Kold-Hold Mfg. Co.
424 N. Grand Avenue
Lansing, Michigan
(Sharp-freeze plates only)

McCray Refrigerator Co.
Kendallville, Indiana

Peerless Company of America
Marion, Indiana

Super Cold Corporation
1020 E. 59th Street
Los Angeles, California

E. Combination Refrigerators

It is possible to use one compressor to maintain the various temperatures for quick-freeze, below-freezing storage and 35° F general storage. However, such equipment should be installed by a skilled refrigeration workman.

The following is a brief description of a home-built freezing plant which includes both the zero box and a cold room:

> The cold room is operated at about 35° F. To reduce cost and operating expense, the zero box may be located inside the cold room and, where possible, with the floor of the zero box on the same level as the floor of the cold room. In some installations, the cold room is upstairs and the zero box downstairs. Both compartments are operated from one compressor. Separate tubing, valves and other materials are required for each. Material and machinery for the 300 to 400 cubic-foot 35° room and a 50 to 60 cubic-foot zero box will cost from $200 to $425. Cost of material for the zero box and the cold room cabinet varies greatly but it is likely that such cost will be between $100 and $200. Carpentering charges or the installation cost of machinery have not been included in any of these estimates. Many farmers prefer to build their own refrigerators. The additional skilled labor of installing the equipment usually does not exceed $20 to $30.

Another type of home-built refrigeration includes a zero box, a cold room and a kitchen refrigerator. The latter is sometimes built in one side of the cold room. The kitchen refrigerator will increase the cost for mechanical features about $30, where there are no ice cube trays, and to about $50 where such freezing trays are supplied. The building material for the 12-30 cubic-foot kitchen refrigerator should not exceed $20. There will be a considerable increase in this cost when the kitchen refrigerator is separated from the cold room.

Home-built Refrigeration Data:

(Mechanical equipment prices listed are dealer's prices. List prices would be higher).

2-temperature Walk-In Refrigerator (40 cu. ft. freezer box, 200 cu. ft. cold room).

Materials for Box Construction

Lumber-T&G flooring-interior, plywood-exterior studding	$ 55.00
Note: Plywood can be substituted for interior walls and ceiling at less cost but T&G should be used for floor.	
Hardware, Paint, Large door (carpenter-built)	20.00
Insulation -- shavings & vapor-proof paper (commercial insulation such as mineral wool will cost $35 if space for shavings not available)	10.00

Mechanical Equipment

½ h. p. condensing unit with necessary tubing, valves, fittings-

(1) For dairy farm handling 20 to 30 gallons milk daily	215.00
(2) For general farm where positive control of cold room not so necessary	180.00
Total	
Dairy farm	300.00
General farm	265.00

2-temperature Reach-in Refrigerator (10 cu. ft. freezer box, 35 cu. ft. cold room)

Materials for Box Construction

Lumber-plywood (interior and exterior), studding	$20.00
Hardware, Paint, Doors (Homemade)	10.00
Insulation - shavings & vapor-proof paper.	5.00
	35.00

Mechanical Equipment

1/3 h.p. condensing unit with tubing, valves and fittings	$150.00
Total	$185.00

Labor not included

Further information concerning home-built refrigeration is given in Extension Bulletin 257 dated December 1940, published by Extension Service, The State College of Washington, Pullman, Washington.

The Refrigeration Parts Supply Company of Spokane, Washington furnishes equipment for home-built walk-in refrigerators and freezer units. Other manufacturers of parts or complete units are listed under the Walk-In and Quick-Freeze sections.

F. Milk Coolers

Complete information regarding electric milk coolers is contained in Operations Memoranda 21.4 dated May 15, 1941, and 26.3 dated May 19, 1941.

Partial list of Manufacturers as follows:

Babson Bros.
Chicago, Illinois

Carrier Corp.
Syracuse, New York

The Creamery Package Mfg. Co.
Chicago, Illinois

Duncan Mfg. Co.
Washington, Missouri

Empire Milking Machine Co.
West Chester, Pennsylvania

Esco Cabinet Company
West Chester, Pennsylvania

Frick Company
Waynesboro, Pennsylvania

General Electric Company
Bloomfield, New Jersey

Icemaster Company
Haverhill, Massachusetts

International Harvester Co.
Chicago, Illinois

E. A. Kaestner, Company
Baltimore, Maryland

Losee Products Company
Hebron, Illinois

Manning Mfg. Co.
Rutland, Vermont

Merchant & Evans
Philadelphia, Pennsylvania

National Electric Tool Co.
Pittsburgh, Pennsylvania

Emil Steinhorst & Sons, Inc.
Utica, New York

Victor Products Corp.
Hagerstown, Maryland

Westinghouse Electric & Mfg. Co.
Mansfield, Ohio

Williams Oil-O-Matic Heating Corp.
Bloomington, Illinois

Stewart-Warner Co.
Chicago, Illinois

Wilson Cabinet Corp.
Smyrna, Delaware

York Ice Machinery Corp.
York, Pennsylvania

Commercial Refrigeratinn Co.
Rochester, New York

Milk Cooling Systems, Inc.
424 E. 4th Street
Cincinnati, Ohio

IV.

POULTRY EQUIPMENT

A. Ultraviolet Lamps

1. Conti-Glo

Continental Lithograph Corporation
R. C. Switzer, Manager
Conti-Glo Division
952 East 72 Street
Cleveland, Ohio

Manufacturer's Description:

The Model 203 Conti-Glo Sunlamp for Poultry is supplied completely wired and ready for use on 110-125 volt, 60 cycle alternating current. Included are an S-4 Mazda sunlamp, approved transformer with hook for simple ceiling suspension, ventilated reflector, special ad-medium socket and 8 feet of approved cord. One Model 203 is recommended for every 100 to 150 birds. The sunlamps are customarily suspended over the feeding hoppers and are burned approximately 4 hours per day. Some raisers prefer to turn the lamps on at 4 a. m. to lengthen the birds' working day. The new low price of the Model 203 Sunlamp and its low operating cost allow the raiser to irradiate his birds with Vitamin D-producing ultraviolet rays at a cost which compares very favorably with that of cod liver oil feeding. The S-4 lamp consumes but 100 watts (the transformer uses an additional 20) and is rated at 1000 hours normal life.

Research work in the laboratories of leading universities and agricultural experiment stations, as well as experience of numerous poultrymen, have shown that proper irradiation of birds with Mazda S-4 sunlamps helps to:

a. Eliminate rickets

b. Increase the hatchability of eggs

c. Increase the strength of egg shells

d. Increase egg production

e. Increase the vitamin D content of the egg yolk

f. Provide light and infrared radiation, thus lengthening the birds' working day

g. Improve the taste of eggs and meat where cod liver oil is eliminated

h. Cure sick birds

List Prices:

Model 203 complete with S-4 sunlamp (shipping weight 14 pounds) $18.90 F.O.B. Cleveland, Ohio. Renewal lamps cost $8.50 each.

2. Gates Guard-Ray

George W. Gates & Company
Franklin Square
Long Island, New York

Manufacturer's Description:

This unit directly irradiates the birds with vitamin D-producing ultraviolet from Mazda Sunlamps. It is shipped ready to use and is easy to install--simply hang it up and plug into nearest 110-125 volt, 60 cycle outlet. The non-tarnishing, heavy gauge reflector helps maintain maximum ultraviolet effectiveness and withstands abuse. Also the reflector is of scientific design, giving wide distribution of ultraviolet and maximum reflective efficiency. The use of sunlamps results in better tasting eggs and flesh. The operation costs are low.

List Prices:

Gates Guard-Ray unit complete with G.E. Mazda S-4 sunlamp, cord and plug (shipping weight approx. 17 pounds) $12.50 F.O.B. Factory. Replacement bulbs are listed at $6.80 each, prepaid.

B. Time Clocks for Ultraviolet Lamp Control

1. R. W. Cramer Company, Incorporated
Centerbrook, Connecticut
Model B, double throw, self-starting, synchronous timer-list price $19.00.

2. Paragon Electric Company
37 West Van Buren Street
Chicago, Illinois
Model 301 Synchronous Time switch - list price $13.00

3. Sangamo Electric Company
Springfield, Illinois
Model 12A Interval Timer complete with cord and plug arrangement - List price $12.75

4. The Tork Clock Company, Incorporated
Mount Vernon, New York
Model No. 191A Clock (for not over 2200 watts) List price $13.00

5. Other manufacturers of electric timing devices are: (Partial list)

General Electric Company
Schenectady, New York

Lyon Rural Electric Company
San Diego, California

Reynolds Electric Company
2646 West Congress Street
Chicago, Illinois

M. H. Rhodes Company
Hartford, Connecticut
(Mark Time Switch)

Walser Automatic Timer Company
420 Lexington Avenue
New York, New York

Zenith Electric Company
605 South Dearborn Street
Chicago, Illinois

6. An improvised timer may be made from an alarm clock.

C. Water Warmers

1. Brower Manufacturing Company
209 North Third Street
Quincy, Illinois

Manufacturer's Description:

This electric fountain heater is suitable for use with almost any fountain of 2 to 8 gallons capacity, and is equipped with automatic thermostatic control with bi-metallic controlled switch rated at 150 watts. Thermostat is factory-adjusted to maintain a water temperature of from 50 to 65 degrees. The heater is constructed of Armco Zincgrip, diameter is 12 inches and height is 8 inches. An 8 foot cord is furnished.

List Prices:

No. 41-139-50 Electric Fountain Heater complete as described above (shipping weight 5 pounds). $3.94

No. 41-13 Electric Fountain Heater-without Thermostatic control-furnished with 60 watt Electric heating element (shipping weight 3 1/2 pounds) 2.84

2. Macomb Steel Products Company
Macomb, Illinois

Manufacturer's Description:

This immersion type, automatic electric water heater is unique in design, and will fit either an open trough or vessel, or the rim-like trough on the ordinary 5, 8, or 10 gallon float or vacuum type waterer. The case is of heavy tinned copper. The automatic snap-action control, which is factory-set, and the nichrome coiled wire element are mounted within the case on a porcelain base. The interior assembly is insulated from the case by sheet mica.

Price:

No. M8 - 22 immersion heater 3.00

3. Montgomery, Ward & Company
Chicago, Illinois

Description and prices of electric water warmers distributed by this company are not available at present.

4. The Trumbull Electric Manufacturing Co.
Plainville, Connecticut

Manufacturer's Description:

This is an immersion water warmer which automatically maintains poultry drinking pan water at a temperature of 50 degrees, regardless of how cold the weather may be. The heater has a capacity of 155 watts and is approved by Underwriters' Laboratories for use on 60 cycle, 110-125 alternating current service. The very important feature in the construction is the neoprene lead cord. A straight rubber lead cord can not be depended upon to give the length of service needed for a water warmer.

Trumbull Water Warmer List Price $3.00

V.

MAKE-IT-YOURSELF EQUIPMENT

A. Chick Brooder

Complete description, specifications, costs of material and instructions for building Chick Brooders are given in a folder of the REA "Make-It-Yourself" series. These folders are available for general distribution. Approximate cost of materials is $19.00.

B. Pig Brooder

Complete description, specifications, costs of material and instructions for building Pig Brooders are given in a folder of the REA "Make-It-Yourself" series. These folders are available for general distribution. Approximate cost of materials is $4.00.

C. Stock Tank Heater

Complete description, specifications, costs of material and instructions for building Stock Tank Heaters are given in folders of the REA "Make-It-Yourself" series. These folders are available for general distribution. Approximate cost of materials is $16.00.

D. Dehydrator

This is in the experimental stage. Prices and data are not available at present.

E. Garden Waterer

A very complete discussion of garden watering is covered in a booklet of the Electro-Economy Series which has already been issued by REA.

Partial list of manufacturers or distributors of sprinkler heads that have proven to be satisfactory for watering the garden with a farm water system:

Manufacturer or Distributor	Sprinkler Description	List Pric
L. R. Nelson Mfg. Co.,Peoria, Ill.	Rainbird # 20	$2.50
Buckner Mfg. Co., Fresno, Cal.	Buckner Sub-Jr.	5.00
" " " " "	Lawn Sprinkler (mod.101)	-
W.D.Allen Mfg. Co.,566 W. Lake St. Chicago, Ill.	Ideal Sprinkler	.70
" " " " " " " " "	Blake sprinkler head	.60
" " " " " " " " "	Red Arrow sprinkler head	3.50
" " " " " " " " "	Red Top sprinkler head	.60
Farm Line Co., Wilsonville, Oregon	Jupe's Pal (small)	7.50

F. Service Cabinet

This equipment is designed to serve as a work table and storage cabinet at nutrition centers. The top is used for serving as well as a food-preparation surface, the drop leaves on each end are used as stands for the roaster and the hotplate, the cupboards on one side are used for the storage of equipment and the screened cupboards for the storage of food supplies. Plans and specifications for this table will shortly be available from the Work-Projects Administration, 1734 New York Avenue, Washington, D. C. The cost of such a cabinet is approximately $20.

G. Flour Sifters

Two sifters with screens of different mesh are necessary to separate corn meal from grits. Home-made sifters are easily made and may be sized so that one fits into the other to save storage space. In such an arrangement the coarse screen sifter outside dimensions are 9½ inches by 9½ inches by 3 inches and ordinary 16-mesh galvanized screen wire is used. The fine sifter outside dimensions are 7 7/8 inches by 7 7/8 inches by 3 inches and 22 to 24-mesh rust-proof screen wire is used. A drawing, illustrating these screens, is shown on page 8 of the booklet entitled "Home and Community Milling," which has already been issued by REA.